

# CEC 2012 Annual Report

## UNITED STATES

### Country Report on the Implementation of the Commitments Derived from the NAAEC

The following report was submitted to the CEC Secretariat by the Government of the United States in accordance with NAAEC.

## Introduction

The information included in this section of the 2012 Annual Report is intended to highlight certain activities and developments related to environmental protection for the calendar year 2012. It does not represent the full range of activities undertaken by the United States (U.S.) government with the NAAEC, nor is it intended to reflect environmental efforts at the state, tribal, territory, or local level.

## Most significant successes in fulfillment of obligations under the agreement

- Louisiana Generating, an electric generating company owned by NRG Energy, Inc., agreed to a settlement at its Big Cajun II coal-fired power plant in New Roads, Louisiana, which will result in the elimination of over 27,300 tons of harmful emissions per year. The settlement will require Louisiana Generating to spend approximately \$250 million to reduce air pollution and also requires the company to pay a civil fine of \$3.5 million and spend \$10.5 million on environmental mitigation projects. Louisiana Generating will achieve these emissions reductions through a combination of new pollution controls, natural gas conversion, and annual emission caps at all three units at the Big Cajun II plant. Emissions of sulfur dioxide (SO<sub>2</sub>) will be reduced by approximately 20,000 tons and nitrogen oxides (NO<sub>x</sub>) by about 3,300 tons. Louisiana Generating also has agreed to further air pollution reductions by 2025, which will reduce SO<sub>2</sub> by at least an additional 4,000 tons each year.
- The Migratory Bird Conservation Commission has approved the investment of nearly \$11 million in revenue from the Migratory Bird Conservation Fund to add an estimated 10,640 wetland acres to seven units of the National Wildlife Refuge System. The commission also approved \$18.4 million in federal funding to conserve more than 95,000 acres of wetlands and associated habitat in the United States under the North American Wetlands Conservation Act.
- As part of the Obama Administration's all of the above approach to American energy, the Department of the Interior approved a 350-megawatt solar energy project on tribal trust land of the Moapa Band of Paiute Indians (Tribe) in Clark County, Nevada. The project marks a

milestone as the first-ever, utility-scale solar project approved for development on tribal lands, and is one of the many steps the administration has taken to help strengthen tribal communities. The project is also the 31st utility-scale renewable energy project that Interior has approved since 2009 as part of a Department-wide effort to advance smart development of renewable energy on our nation's public lands. Prior to 2009, there were no solar energy projects permitted on public lands; today's approval brings the total to 17 solar projects, 6 wind farms, and 8 geothermal plants. If built by the companies, the renewable energy projects approved by this administration will provide approximately 7,200 megawatts of power to communities across the West, or enough to power nearly 2.5 million homes.

- For the first time, comprehensive greenhouse gas (GHG) data reported directly from large facilities and suppliers across the country are now easily accessible to the public through EPA's GHG Reporting Program. The 2010 GHG data include public information from facilities in nine industry groups that directly emit large quantities of GHGs, as well as suppliers of certain fossil fuels. EPA's online data publication tool allows users to view and sort GHG data for calendar year 2010 from over 6,700 facilities in a variety of ways—including by facility, location, industrial sector, and the type of GHG emitted. This information can be used by communities to identify nearby sources of GHGs, help businesses compare and track emissions, and provide information to state and local governments. GHG data for direct emitters show that in 2010:
  - Power plants were the largest stationary sources of direct emissions with 2,324 million metric tons of carbon dioxide equivalent (mmtCO<sub>2</sub>e), followed by petroleum refineries with emissions of 183 mmtCO<sub>2</sub>e.
  - CO<sub>2</sub> accounted for the largest share of direct GHG emissions with 95 percent, followed by methane with 4 percent, and nitrous oxide and fluorinated gases accounting for the remaining 1 percent.
  - 100 facilities each reported emissions over 7 mmtCO<sub>2</sub>e, including 96 power plants, two iron and steel mills and two refineries.
  
- BP North America Inc. has agreed to pay an \$8 million penalty and invest more than \$400 million to install state-of-the-art pollution controls and cut emissions from BP's petroleum refinery in Whiting, Ind. When fully implemented, the agreement is expected to reduce harmful air pollution that can cause respiratory problems such as asthma and are significant contributors to acid rain, smog and haze, by more than 4,000 tons per year. The settlement will lead to the installation of innovative pollution controls on the largest sources of emissions at the Whiting refinery, including extensive new controls on the refinery's flaring devices. Flaring devices are used to burn off waste gases. The more waste gases sent to a flare, and the less efficient the flare is when burning those gases, the more pollution that will occur. Under the settlement, BP will install new equipment that will limit the amount of waste gas sent to flaring devices in the first place, as well as implement innovative, cutting-edge controls to ensure proper combustion efficiency for any gases that are burned in a flaring device. These requirements are part of the Environmental Protection Agency's national effort to reduce emissions from flares at refineries, petrochemical and chemical plants.
  
- Environmental Protection Agency Administrator Lisa P. Jackson and Canada's Minister of the Environment Peter Kent signed the amended Great Lakes Water Quality Agreement at a formal ceremony in Washington, D.C. First signed in 1972 and last amended in 1987, the Great Lakes Water Quality Agreement is a model of bi-national cooperation to protect the world's largest surface freshwater system and the health of the surrounding communities. The revised agreement will

facilitate United States and Canadian action on threats to Great Lakes water quality and includes strengthened measures to anticipate and prevent ecological harm. New provisions address aquatic invasive species, habitat degradation and the effects of climate change, and support continued work on existing threats to people's health and the environment in the Great Lakes Basin such as harmful algae, toxic chemicals, and discharges from vessels.

- Four companies have agreed to pay \$25 million for the cleanup of the Rio Tinto Mine, an abandoned copper mine in Elko County, Nevada. The state of Nevada will oversee the cleanup with input from the U.S. EPA and the Shoshone Paiute Tribes of Duck Valley. The four corporations financing the cleanup, Atlantic Richfield Company, DuPont and Company, The Cleveland-Cliffs Iron Company and Teck American Inc. are corporate successors to companies that operated the mine from 1932 to 1976. A fifth entity, Mountain City Remediation, has been created by the four defendants to conduct the cleanup. Under the terms of the agreement, the defendants agreed to remove mine tailings from Mill Creek, improve the creek to support the redband trout, and improve water quality in Mill Creek and the East Fork Owyhee River. The defendants will also pay for the Shoshone Paiute Tribes to monitor the cleanup. The companies are required to provide robust performance guarantees including payments to a trust account they will use to implement the cleanup.
- The Environmental Protection Agency (EPA) announced nearly \$11 million in grants to eight universities through EPA's Science to Achieve Results (STAR) program. These grants will help the universities develop fast and effective methods to test chemicals' toxicity to people and the environment. These innovative testing methods will be used to predict a chemical's potential to interact with biological processes that could lead to reproductive and developmental problems, and disruption of the endocrine system. The grantees will focus on developing methods and models to predict how exposure to environmental and synthetic (man-made) chemicals and chemical mixtures may harm the public. Some synthetic chemicals are known endocrine disruptors, which interfere with or even mimic natural hormones and cause damage to the development and function of vital organs, particularly in young children and developing fetuses. There are currently thousands of chemicals in use and hundreds more introduced every year.

## State of the Environment

- The Arctic region continued to break records in 2012—among them the loss of summer sea ice, spring snow cover, and melting of the Greenland ice sheet. This was true even though air temperatures in the Arctic were unremarkable relative to the last decade, according to a new report released today.
  - **Snow cover:** A new record low snow extent for the Northern Hemisphere was set in June 2012, and a new record low was reached in May over Eurasia.
  - **Sea ice:** Minimum Arctic sea ice extent in September 2012 set a new all-time record low, as measured by satellite since 1979.
  - **Greenland ice sheet:** There was a rare, nearly ice sheet-wide melt event on the Greenland ice sheet in July, covering about 97 percent of the ice sheet on a single day.

- **Vegetation:** The tundra is getting greener and there's more above-ground growth. During the period of 2003-2010, the length of the growing season increased through much of the Arctic.
  - **Wildlife & food chain:** In northernmost Europe, the Arctic fox is close to extinction and vulnerable to the encroaching Red fox. Additionally, recent measurements of massive phytoplankton blooms below the summer sea ice suggest that earlier estimates of biological production at the bottom of the marine food chain may have been ten times lower than was occurring.
  - **Ocean:** Sea surface temperatures in summer continue to be warmer than the long-term average at the growing ice-free margins, while upper ocean temperature and salinity show significant inter-annual variability with no clear trends.
  - **Weather:** Most of the notable weather activity in fall and winter occurred in the sub-Arctic due to a strong positive North Atlantic Oscillation, expressed as the atmospheric pressure difference between weather stations in the Azores and Iceland. There were three extreme weather events including an unusual cold spell in late January to early February 2012 across Eurasia, and two record storms characterized by very low central pressures and strong winds near western Alaska in November 2011 and north of Alaska in August 2012.
- Earth's oceans, forests and other ecosystems continue to soak up about half the carbon dioxide emitted into the atmosphere by human activities, even as those emissions have increased, according to a study by University of Colorado and National Oceanic and Atmospheric Association scientists published in the journal [ [HYPERLINK "http://www.noaanews.noaa.gov/exit.html?http%3A%2F%2Fwww.nature.com%2Fnature%2Fjournal%2Fv488%2Fn7409%2Ffull%2Fnature11299.html"](http://www.noaanews.noaa.gov/exit.html?http%3A%2F%2Fwww.nature.com%2Fnature%2Fjournal%2Fv488%2Fn7409%2Ffull%2Fnature11299.html) ]. The scientists analyzed 50 years of global carbon dioxide (CO<sub>2</sub>) measurements and found that the processes by which the planet's oceans and ecosystems absorb the greenhouse gas are not yet at capacity. Carbon dioxide is emitted into the atmosphere mainly by fossil fuel combustion but also by forest fires and some natural processes. The gas can also be pulled out of the atmosphere into the tissues of growing plants or absorbed by the waters of Earth's oceans. A series of recent studies suggested that natural sinks of carbon dioxide might no longer be keeping up with the increasing rate of emissions. If that were to happen, it would cause a faster-than-expected rise in atmospheric carbon dioxide and projected climate change impacts.
  - The Environmental Protection Agency launched a new app and website to help people find information on the condition of thousands of lakes, rivers and streams across the United States from their smart phone, tablet or desktop computer. Available at [ [HYPERLINK "http://www.epa.gov/mywaterway"](http://www.epa.gov/mywaterway) ], the How's My Waterway app and website uses GPS technology or a user-entered zip code or city name to provide information about the quality of local water bodies. The release of the app and website helps mark the 40<sup>th</sup> anniversary of the Clean Water Act giving citizens a special role in caring for the nation's water resources..
  - Scientists have found a large reduction in the amount of the coldest deep ocean water, called Antarctic Bottom Water, all around the Southern Ocean using data collected from 1980 to 2011. These findings, in a study [ [HYPERLINK "http://www.noaanews.noaa.gov/exit.html?http%3A%2F%2Fdx.doi.org%2F10.1175%2FJCLI-D-11-00612.1"](http://www.noaanews.noaa.gov/exit.html?http%3A%2F%2Fdx.doi.org%2F10.1175%2FJCLI-D-11-00612.1) ], will likely stimulate new research on the causes of this change. Two oceanographers from National Oceanic and Atmospheric Association and the University of

Washington find that Antarctic Bottom Water has been disappearing at an average rate of about eight million metric tons per second over the past few decades, equivalent to about fifty times the average flow of the Mississippi River or about a quarter of the flow of the Gulf Stream in the Florida Straits. The world's deep ocean currents play a critical role in transporting heat and carbon around the planet, thus regulating our climate.

- The Obama Administration released a [ [HYPERLINK "http://www.whitehouse.gov/sites/default/files/page/files/everglades\\_report\\_\\_13\\_july\\_2012.pdf"](http://www.whitehouse.gov/sites/default/files/page/files/everglades_report__13_july_2012.pdf) ] outlining the historic Federal investments and progress made in Everglades restoration and announced \$80 million in additional funding to support farmers and ranchers who voluntarily conserve wetlands on agricultural land in the Northern Everglades Watershed. This new investment, part of the Department of Agriculture's Wetlands Reserve Program (WRP), will restore an additional 23,000 acres of wetlands vital to water quality and wildlife habitat in the Everglades system. Using the partnerships and community-led approach that is a hallmark of the President's America's Great Outdoors initiative, the Administration has reinvigorated Federal leadership in Everglades restoration, investing \$1.5 billion in Everglades projects and initiatives that will make a measurable impact on the ground, including nearly \$900 million to jump start key construction projects that will restore water flow and essential habitat. These projects already have generated 6,600 Florida jobs and are expected to generate more.
- In California's Los Angeles Basin, levels of some vehicle-related air pollutants have decreased by about 98 percent since the 1960s, even as area residents now burn three times as much gasoline and diesel fuel. Between 2002 and 2010 alone, the concentration of air pollutants called volatile organic compounds (VOCs) dropped by half, according to a new study by National Oceanic and Atmospheric Association scientists and colleagues, [ [HYPERLINK "http://www.noaa.gov/newsroom/2012/01/20120117.html"](http://www.noaa.gov/newsroom/2012/01/20120117.html) ] in the *Journal of Geophysical Research*. VOCs, primarily emitted from the tailpipes of vehicles, are a key ingredient in the formation of ground-level ozone which, at high levels, can harm people's lungs and damage crops and other plants. The 98 percent drop in VOCs in the last 50 years does not mean that ozone levels have dropped that steeply; the air chemistry that leads from VOCs to ozone is more complex than that. Ozone pollution in the Los Angeles Basin has decreased since the 1960s, but levels still don't meet ozone standards set by the Environmental Protection Agency. Requirements for catalytic converters, use of reformulated fuels less prone to evaporate, and improved engine efficiency of new vehicles have all likely contributed to overall declines in vehicle-related pollution, including VOCs.
- More than 1.3 million cubic yards of sediment contaminated with PCBs have been removed from the Hudson River. Since dredging began on May 9, 2012, more than 650,000 cubic yards of sediment have been dredged from a three-mile section of the river south of the village of Fort Edward, New York, exceeding the season goal of dredging 350,000 cubic yards. With the third season of dredging complete, the Environmental Protection Agency is well on the way toward its goal of removing 2.65 million cubic yards of contaminated sediment from a 40-mile stretch of the upper Hudson River. The dredging project has also created 500 jobs and additional economic benefits for the area.
- Forests, grasslands and shrublands and other ecosystems in the West sequester nearly 100 million tons (90.9 million metric tons) of carbon each year, according to a Department of the

Interior report released today. Carbon that is absorbed or “sequestered” through natural processes reduces the amount of carbon dioxide in the atmosphere. The 100 million tons sequestered in western ecosystems is an amount equivalent to – and counterbalances the emissions of – more than 83 million passenger cars a year in the United States, or nearly 5 percent of Environmental Protection Agency’s 2010 estimate of the nation’s total greenhouse gas emissions. The report, authored by U.S. Geological Survey scientists, is part of a congressionally mandated national assessment of carbon storage and sequestration capacities by ecosystems. This assessment estimates the ability of different ecosystems in the West to store carbon — information that will be vital for science-based land-use and land-management decisions. The first report, on the [ [HYPERLINK "http://pubs.usgs.gov/pp/1787/"](http://pubs.usgs.gov/pp/1787/) ], was released in December 2011; reports on the eastern United States, Alaska, and Hawaii will follow.

- New [ [HYPERLINK "http://www.mpa.gov/pdf/helpful-resources/mpa\\_analysis\\_2012\\_0320.pdf"](http://www.mpa.gov/pdf/helpful-resources/mpa_analysis_2012_0320.pdf) ] of updated data has shown that eight percent of U.S. waters are currently designated as marine protected areas (MPAs), with the vast majority of these areas open to fishing and other activities, according to National Oceanic and Atmospheric Association. U.S. sites are cataloged in the recently updated [ [HYPERLINK "http://www.mpa.gov/dataanalysis/mpainventory/"](http://www.mpa.gov/dataanalysis/mpainventory/) ], available online. The eight percent figure does not include MPAs specifically established to sustain fisheries production, which often have specific restrictions on fishing gear over large ocean areas. Other inventory analyses including these fishery MPAs, however, show that 92 percent of the area within U.S. MPAs allows some type of activity, and 85 percent is open to fishing. The analysis also showed that more than two-thirds of all U.S. MPAs were created, at least in part, to conserve natural heritage values, such as biodiversity, ecosystems, or protected species. About a quarter of sites focus on sustainable production, such as those established to recover overfished stocks, protect species readily taken as by-catch, or preserve essential fish habitats, while the remaining approximately ten percent were established to conserve our nation’s cultural heritage.

## Changes in Level of Protection

- The Bureau of Safety and Environmental Enforcement (BSEE) and the National Oceanic and Atmospheric Administration (NOAA) have partnered to enhance the Environmental Response Management Application (ERMA®) for the Arctic region by summer 2012. ERMA® is the same interactive online mapping tool used by federal responders during the Deepwater Horizon oil spill. This effort will help address numerous challenges in the Arctic where increasing ship traffic and proposed energy development are increasing the risk of oil spills and chemical releases. A new federal interactive online mapping tool used by emergency responders during the Deepwater Horizon oil spill has been expanded to include the Arctic.
- The Environmental Protection Agency (EPA) and the Department of Agriculture’s Food Safety and Inspection Service (FSIS) announced the first-ever Microbial Risk Assessment (MRA) Guideline. This new MRA Guideline lays out an overarching approach to conducting meaningful assessments of the risks to Americans posed by pathogens in food and water. Pathogens

ingested in food and water can result in acute gastrointestinal-related illnesses; some gastrointestinal-related illnesses can result in long-term and permanent health effects as well as premature death. The new guideline will improve the quality of the data collected by public health scientists charged with protecting Americans from pathogen-related risks in food and water.

- The Migratory Bird Conservation Commission has approved more than \$1.3 million from the Migratory Bird Conservation Fund to protect an estimated 1,368 acres of waterfowl habitat on three units of the National Wildlife Refuge System. The commission also approved more than \$25 million in federal grants through the North American Wetlands Conservation Act to support public-private partnership activities that will conserve more than 144,000 acres of wetlands and associated habitats in the United States and Canada.
- Secretary of the Interior Ken Salazar joined U.S. and Mexico delegations in San Diego, California in signing the Minute 319 to the 1944 Treaty with Mexico – an historic bi-national agreement to guide future management of the Colorado River through 2017. The agreement was developed and facilitated by the U.S. and Mexico Sections of the International Boundary and Water Commission. The five-year agreement approved by both governments provides for a series of joint cooperative actions between the United States and Mexico. Elements of the agreement include:
  - Implementing efforts to enhance water infrastructure and promote sharing, storing, and conserving water as needed during both shortages and surpluses;
  - Establishing proactive basin operations by applying water delivery reductions when Lake Mead reservoir conditions are low in order to deter more severe reductions in the future;
  - Extending humanitarian measures from a 2010 agreement, [ [HYPERLINK "http://www.doi.gov/news/pressreleases/Salazar-Elvira-Announce-Water-Agreement-to-Support-Response-to-Mexicali-Valley-Earthquake.cfm"](http://www.doi.gov/news/pressreleases/Salazar-Elvira-Announce-Water-Agreement-to-Support-Response-to-Mexicali-Valley-Earthquake.cfm) ], to allow Mexico to defer delivery of a portion of its Colorado River allotment while it continues to make repairs to earthquake-damaged infrastructure;
  - Establishing a program of Intentionally Created Mexican Allocation whereby Mexico could temporarily reduce its order of Colorado River water, allowing that water to be delivered to Mexico in the future; and
  - Promoting the ecological health of the Colorado River Delta.

## **Government Enforcement Action**

- The United States has entered into two settlements worth more than \$50 million to clean up contamination from the B.F. Goodrich Superfund Site in San Bernardino County. There are a dozen settling parties including Emhart Industries (Emhart), and Pyro Spectaculars, Inc. (PSI), as well as the Cities of Rialto and Colton and County of San Bernardino, Calif. The Superfund site has been used to store, test and manufacture fireworks, munitions, rocket motors, and pyrotechnics and was added to the Environmental Protection Agency's National Priorities List in September 2009. The area's

groundwater is contaminated with trichloroethylene (TCE) and perchlorate, which have resulted in the closure of public drinking water supply wells in the communities of Rialto and Colton.

- Dover Chemical Corporation has agreed to pay \$1.4 million in civil penalties for the unauthorized manufacture of chemical substances at facilities in Dover, Ohio and Hammond, Ind. The settlement resolves violations of the Toxic Substances Control Act premanufacture notice obligations for its production of various chlorinated paraffins. Dover Chemical produces the vast majority of the chlorinated products sold in the United States. As part of the settlement, Dover Chemical has ceased manufacturing short-chain chlorinated paraffins, which have persistent, bioaccumulative and toxic (PBT) characteristics. PBTs pose a number of health risks, particularly for children, including genetic impacts, effects on the nervous system, and cancer. Dover Chemical will also submit premanufacture notices to EPA for various medium-chain and long-chain chlorinated paraffin products.
- Keoje Marine was sentenced to pay a \$1.15 million criminal penalty, \$250,000 of which will go to the National Fish and Wildlife Foundation as a community service payment for projects aimed at protecting and restoring marine resources in the District of Hawaii. Keoje Marine pleaded guilty to three felonies: violating the Clean Water Act for the dumping of oily bilge waste into waters off Hawaii that may have affected the natural resources of the United States; violating the Act to Prevent Pollution from ships for covering up the dumping of the oily waste by falsifying the vessel's oil record book; and obstruction of justice during a U.S. Coast Guard inspection of the M/T Keoje Tiger in October 2011.
- Farms Inc. was sentenced in federal court to five years probation and ordered to pay \$1.5 million in fines, restitution and community service payments for violating the Clean Water Act when they discharged hog waste into a stream that leads to the Waccamaw River. William B. Freedman, president of Freedman Farms, was sentenced to six months in prison to be followed by six months of home confinement. Freedman Farms was sentenced to pay a \$500,000 criminal fine and \$925,000 in restitution.
- Coffeyville Resources Refining & Marketing (CRRM) has agreed to pay a civil penalty of more than \$970,000 and invest more than \$4.25 million in new pollution controls and \$6.5 million in operating costs to resolve alleged violations of air, Superfund and community right-to-know laws at its Coffeyville, Kansas refinery. The settlement will benefit the environment and human health by requiring new and upgraded pollution controls, more stringent emission limits and more aggressive leak-detection and repair practices to reduce emissions from refinery equipment and process units. Sulfur dioxide (SO<sub>2</sub>) and nitrogen oxide (NO<sub>x</sub>), two pollutants emitted from refineries, can cause health problems and are significant contributors to acid rain, smog and haze.
- Pharmacia Corporation and Bayer CropScience Inc. have agreed to pay \$4.25 million to federal and state natural resource trustees to resolve claims for natural resource damages connected with the Industri-plex Superfund site located in Woburn, Massachusetts. Operations at the Industri-plex Superfund site from the 1850s to the 1960s contaminated the Aberjona River, as well as associated wetlands and the Mystic Lakes, with arsenic, chromium and other hazardous substances. Under the Comprehensive Environmental Response, Compensation, and Liability Act, parties that have disposed of hazardous substances at a site are liable for damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction or loss.

- The Department of Justice and the U.S. Environmental Protection Agency (EPA) reached agreement with dozens of companies and government agencies that will result in a \$56.4 million cleanup of the “Malone Services Company” Superfund Site in Texas City, Texas, a former waste-disposal site near the shore of Galveston Bay. The settlement requires a group of 27 companies to clean up the site, pay EPA \$900,000 towards past and future costs, and reimburse the state of Texas for \$796,726 in past costs. Among the companies doing the clean-up work are BP Products North America Inc., Pharmacia (formerly Monsanto), Marathon Oil Company, Exxon Mobil Corporation and BASF Corporation.
- Two subsidiaries of Sinclair Oil Corporation resolved alleged violations of air pollution limits established in a 2008 consent decree at refineries in Casper and Sinclair, Wyoming. Sinclair Casper Refining Co. and Sinclair Wyoming Refining Co. will pay stipulated penalties totaling \$3,844,000 and spend approximately \$10.5 million on additional pollution control equipment and other projects to resolve the allegations. The settlement will require the Sinclair companies to reduce emissions of nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>) and particulate matter by approximately 24, 385, and 59 tons per year, respectively.
- Sterling Suffolk Racecourse LLC will pay a civil penalty of \$1.25 million to resolve violations of the Clean Water Act (CWA) at its Suffolk Downs racetrack facility in Revere and East Boston, Massachusetts. The company is also spending more than \$3 million to prevent polluted water from entering nearby waterways and will perform three environmental projects worth approximately \$742,000 that will provide water quality monitoring and protection efforts for more than 123 square miles of watershed.
- The Scotts Miracle-Gro Company, a producer of pesticides for commercial and consumer lawn and garden uses, was sentenced in federal district court in Columbus, Ohio, to pay a \$4 million fine and perform community service for eleven criminal violations of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), which governs the manufacture, distribution, and sale of pesticides. Scotts pleaded guilty in February 2012 to illegally applying insecticides to its wild bird food products that are toxic to birds, falsifying pesticide registration documents, distributing pesticides with misleading and unapproved labels, and distributing unregistered pesticides. This is the largest criminal penalty under FIFRA to date. In a separate civil agreement with the Environmental Protection Agency, Scotts agreed to pay more than \$6 million in penalties and spend \$2 million on environmental projects to resolve additional civil pesticide violations. The violations include distributing or selling unregistered, canceled, or misbranded pesticides, including products with inadequate warnings or cautions.
- QEP Field Services Co. (QEPFS), formerly Questar Gas Management Co., settled to resolve alleged violations of the Clean Air Act at five natural gas compressor stations on the Uintah and Ouray Reservation in Northeastern Utah. Four members of the Ute Indian Tribe intervened as co-plaintiffs. Under the proposed settlement, QEPFS will pay a \$3.65 million civil penalty and pay \$350,000 into a Clean Air Trust Fund to be established by the tribal member interveners. The settlement also requires QEPFS to reduce its emissions by removing certain equipment, installing additional pollution controls, and replacing the natural gas powered instrument control systems with compressed air control systems. The actions required in the settlement will eliminate approximately 210 tons of nitrogen oxide (NO<sub>x</sub>), 219 tons of carbon monoxide, 17 tons of HAPs, and more than 166 tons of volatile organic compounds (VOCs) per year. It will also conserve 3.5 million cubic feet of gas each year, which could heat approximately 50 U.S. households. The reduction in methane emissions

(a greenhouse gas that is a component of natural gas) is equivalent to planting more than 300 acres of trees.

- Roquette America, Inc., has agreed to pay a \$4.1 million civil penalty to settle alleged violations of the Clean Water Act and its National Pollutant Discharge Elimination System (NPDES) permit at its grain processing facility in Keokuk, Iowa. As early as 2008, Roquette was aware that its waste water treatment plant was marginally adequate and that it could not handle spills or surges in loading. Instead of constructing additional containment structures for waste water surges, or routing spills to the waste water treatment plant, Roquette allowed the industrial waste to be discharged directly into the Mississippi River and Soap Creek.
- Hess Corporation has agreed to pay an \$850,000 civil penalty and spend more than \$45 million in new pollution controls to resolve Clean Air Act violations at its Port Reading, N.J., refinery. Once fully implemented, the controls required by the settlement are estimated to reduce emissions of nitrogen oxide (NO<sub>x</sub>) by 181 tons per year and result in additional reductions of volatile organic compounds (VOCs). High concentrations of NO<sub>x</sub> and VOCs, key pollutants emitted from refineries, can have adverse impacts on human health, including contributing to childhood asthma, and are significant contributors to smog. In addition to the upgraded pollution controls, the agreement will require more stringent emission limits, and aggressive monitoring, leak-detection and repair practices to reduce emissions from refinery equipment and processing units.
- Ohio-based Owens-Brockway Glass Container Inc., the nation's largest glass container manufacturer, has agreed to install pollution control equipment to reduce harmful emissions of nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>) and particulate matter (PM) by nearly 2,500 tons per year and pay a \$1.45 million penalty to resolve alleged Clean Air Act violations at five of the company's manufacturing plants.

## **Future Plans in Implementing the Agreement**

- The Department of the Interior, in partnership with the Department of Energy, will publish the Final Programmatic Environmental Impact Statement (PEIS) for solar energy development in six southwestern states—Arizona, California, Colorado, Nevada, New Mexico, and Utah. The final Solar PEIS represents a major step forward in the permitting of utility-scale solar energy on public lands throughout the west. The announcement builds on the historic progress made in fostering renewable energy development on public lands. When President Obama took office, there were no solar projects permitted on public lands; since 2009, Interior has approved 17 utility-scale solar energy projects that, when built, will produce nearly 5,900 megawatts of energy—enough to power approximately 1.8 million American homes. Thanks to steps already taken by this administration, renewable energy from sources like wind and solar have doubled since the President took office.
- Environmental Protection Agency (EPA) Region 9 announced \$5 million in funding that will pay for cleaner locomotives throughout the San Joaquin Valley, including a state-of-the art locomotive operating between the Port of Stockton and Lodi. EPA and its partners in the valley, the California

Air Resources Board and the San Joaquin Valley Air Pollution Control District, made the announcement at the Central California Traction Rail Company in Stockton, CA. In addition, approximately \$16 million in grants was announced to slash diesel emissions, advance air quality and improve public health throughout the state of California. The San Joaquin Valley, one of the most productive agricultural areas in the country, also has some of the nation's worst air quality and highest rates of asthma. Federal, local and state partners are working to alleviate these problems by channeling significant funds into new clear air technologies.

- Top leaders from National Oceanic and Atmospheric Association (NOAA) and the European Commission's Joint Research Centre (JRC) signed a landmark [ [HYPERLINK "http://www.noaanews.noaa.gov/stories2012/pdfs/Implementing-Arrangement-JRC-NOAA-USA.pdf"](http://www.noaanews.noaa.gov/stories2012/pdfs/Implementing-Arrangement-JRC-NOAA-USA.pdf) ] that will further strengthen cooperative science activities in the areas of climate, weather, oceans and coasts. The signing also marked the launch of the first four environmental monitoring projects under the agreement. Meeting in Brussels, Belgium, Jane Lubchenco, Ph.D., Under Secretary of commerce for oceans and atmosphere and NOAA administrator, and Dominique Ristori, director general of the JRC, signed the agreement, which calls for exchanges of personnel, shared use of scientific infrastructure, support for joint research, access to laboratory facilities, scientific training and timely exchange of information.
- ZHome – the ultra-sustainable, 10-unit townhome development in Issaquah, WA that is redefining the future of housing – is also the first community in the Nation in which every home has earned the WaterSense label for new homes. The WaterSense program at U.S. Environmental Protection Agency is modeled after its highly successful Energy Star program. The goal of WaterSense is to significantly reduce water use nationwide to save water resources for future generations. A home that is certified to earn the WaterSense label will use at least 20 percent less water than a standard, newly-constructed home and the high-efficiency WaterSense labeled fixtures perform as well or better than their traditional counterparts. The benefits of the certification include:
  - Lower utility bills for future residents
  - Reduced strain on water and wastewater systems
  - More water left in streams and aquifers for salmon, recreation and other uses
  - Fewer greenhouse gas emissions due to reduced energy demands from water treatment
- U.S. Environmental Protection Agency (EPA) is providing \$950,000 to help 17 communities expand green infrastructure use to improve water quality and protect people's health and benefit communities. Green infrastructure uses vegetation and soil to manage rainwater where it falls, keeping polluted stormwater from entering sewer systems and waterways in local communities. The EPA funding is intended to increase incorporation of green infrastructure into stormwater management programs, protect water quality, and provide community benefits including job creation and neighborhood revitalization.
- In response to a court order, the U.S. Environmental Protection Agency (EPA) proposed updates to its national air quality standards for harmful fine particle pollution, including soot (known as PM2.5). These microscopic particles can penetrate deep into the lungs and have been linked to a wide range of serious health effects, including premature death, heart attacks, and strokes, as well as acute bronchitis and aggravated asthma among children. A federal court ruling required EPA to update the standard based on best available science. The proposal, which meets that requirement, builds on smart steps already taken by the EPA to slash dangerous pollution in communities across the

country. Thanks to these steps, 99 percent of U.S. counties are projected to meet the proposed standard without any additional action. EPA's proposal would strengthen the annual health standard for harmful fine particle pollution (PM<sub>2.5</sub>) to a level within a range of 13 micrograms per cubic meter to 12 micrograms per cubic meter. The current annual standard is 15 micrograms per cubic meter. The proposed changes, which are consistent with the advice from the agency's independent science advisors, are based on an extensive body of scientific evidence that includes thousands of studies – including many large studies which show negative health impacts at lower levels than previously understood. By proposing a range, the agency will collect input from the public as well as a number of stakeholders, including industry and public health groups, to help determine the most appropriate final standard to protect public health. It is important to note that the proposal has zero effect on the existing daily standard for fine particles or the existing daily standard for coarse particles (PM<sub>10</sub>), both of which would remain unchanged.

- In the near future, National Oceanic and Atmospheric Association (NOAA) scientists will begin using data from an advanced instrument to monitor the health of Earth's stratospheric ozone, a layer in the atmosphere that shields the world's population from harmful levels of the Sun's ultraviolet radiation. The Ozone Mapper Profiler Suite, or OMPS, is one of five new instruments flying aboard NASA's Suomi National Polar-orbiting Partnership satellite (Suomi NPP), which was launched on October 28, 2011. OMPS measures stratospheric ozone, which has eroded over the years as a result of chlorine and bromine from human-produced substances such as chlorofluorocarbons (CFCs) and halons.
- The Environmental Protection Agency (EPA) awarded five grants totaling almost \$2 million to academic institutions for research on innovative processes to further improve air quality in the U.S. and help track the effectiveness of pollution control measures. Pollutants such as ozone and fine particles are linked to a variety of serious health effects, including aggravation of asthma and other lung diseases, heart attacks, increased hospital admissions and medication use, and premature death. The grants announced today are focused on generating better data and tools to enable regulatory authorities to more effectively ensure that the air we breathe is healthy. The information gathered through this new research will help inform policy decisions that affect air quality, including the way states and cities address short-term air quality challenges.
- The Department of Energy announced the start of an ambitious initiative to capture the potential of wind energy off American coasts. As part of a planned six-year \$180 million initiative, an initial \$20 million were available in late 2012 as the first step in supporting up to four innovative offshore wind energy installations across the United States. These offshore wind projects will accelerate the deployment of breakthrough wind power technologies that will help diversify our nation's energy portfolio, promote economic development and launch a new industry here in America.
- The Environmental Protection Agency (EPA) launched its Sustainable Materials Management (SMM) Electronics Challenge, an initiative to make protective electronics refurbishing and recycling practices the industry standard. EPA Deputy Assistant Administrator for Solid Waste and Emergency Response Lisa Feldt, joined by leaders from Best Buy, LG Electronics, Panasonic, Samsung, Sharp, Sprint, and Staples, made the announcement at Vintage Tech Recyclers, a certified electronics recycling facility in Romeoville, Ill. By participating in the SMM Electronics Challenge, leaders in the electronics industry are committing to send 100 percent of the used electronics that they collect to third-party certified refurbishers and recyclers and to increase the amount of used electronics they collect. Through this challenge, EPA is providing a transparent and measurable way for electronic

companies to commit to safe and environmentally protective practices for the refurbishment and recycling of used electronics, and publically show progress toward recycling goals.

- Building on President Obama's call in the 2012 State of the Union, Houston, Texas is joining the Better Buildings Challenge. The Challenge is a public-private partnership that seeks to improve energy efficiency 20 percent by 2020 in commercial, government, and school buildings across the country. The City of Houston is committing to improve energy efficiency across 30 million square feet of public and private buildings throughout the city. Through its participation in the Better Buildings Challenge, the City of Houston works with local partners to implement initiatives that reduce emissions, protect air quality and save taxpayers money. In January, [ [HYPERLINK "http://www.whitehouse.gov/the-press-office/2011/12/02/we-cant-wait-president-obama-announces-nearly-4-billion-investment-energ"](http://www.whitehouse.gov/the-press-office/2011/12/02/we-cant-wait-president-obama-announces-nearly-4-billion-investment-energ) ] nearly \$4 billion in combined federal and private sector funding for building energy upgrades over the next two years. More than 60 companies, cities, universities, hospitals, and other partners throughout the U.S. have committed to upgrading more than 1.6 billion square feet of building space nationwide.
- The Environmental Protection Agency (EPA) is awarding \$30 million for clean diesel projects as part of its ongoing campaign to reduce harmful diesel exhaust that can lead to asthma attacks and premature deaths. The Diesel Emission Reduction Program, also known as DERA, is designed to replace, retrofit or repower older diesel-powered engines like marine vessels, locomotives, trucks and buses. Diesel engines are durable, fuel-efficient workhorses in the American economy. However, older diesel engines that predate newer, cleaner standards emit large amounts of air pollutants, such as nitrogen oxides (NO<sub>x</sub>) and particulate matter (PM). These pollutants are linked to health problems, including asthma, lung and heart disease and premature death. The clean diesel projects funded through these grants will work to address the more than 11 million older diesel engines that continue to emit higher levels of pollution.
- National Oceanic and Atmospheric Association (NOAA) announced the results of its recent competitions for education grants to enhance science education activities in classrooms, aquariums, museums and other institutions across America. A total of \$4.5 million in grants from the [ [HYPERLINK "http://www.oesd.noaa.gov/"](http://www.oesd.noaa.gov/) ]'s Environmental Literacy Grants Program will be awarded to support six unique, multi-year projects. Projects are designed to increase stewardship and inform decision-making within a diverse pool of educators, students and the public to help promote environmental literacy. The selected projects will partner with NOAA's research laboratories, national marine sanctuaries, Climate Program Office, National Marine Fisheries Service, National Weather Service, Pacific Services Center, Coral Reef Conservation Program and Sea Grant.
- As part of the Obama Administration's commitment to strengthening partnerships with Tribal Nations and supporting tribal energy development, U.S. Department of Energy announced that 19 clean energy projects will receive more than \$6.5 million. These competitively selected projects will allow Native American Tribes to advance clean energy within their communities by assessing local energy resources, developing renewable energy projects and deploying clean energy technologies. These projects will help Tribal communities across the country save money and create new job and business opportunities.
- The Department of Interior announced \$20.5 million in grants to support 24 projects in 13 states to conserve and restore coastal wetlands and their fish and wildlife habitat. The grants, awarded under

the 2012 National Coastal Wetlands Conservation Grant Program, will be matched by nearly \$21 million in partner contributions from state and local governments, private landowners and conservation groups.

- Through its Advanced Research Projects Agency – Energy (ARPA-E), the Department of Energy (DOE) will make \$30 million available for a new research competition in the coming months that will engage our country’s brightest scientists, engineers and entrepreneurs to find ways to harness our abundant supplies of domestic natural gas for vehicles. DOE will also make \$14 million available to support research and development into biofuels from algae. These programs will spur American innovation and encourage scientific breakthroughs that will help diversify the nation’s energy portfolio, grow American companies, and develop alternative vehicle technologies that do not rely on oil.
- Busy shipping lanes off the California coast, including routes that cross three national marine sanctuaries, will be adjusted to protect endangered whales from ship strikes. The International Maritime Organization (IMO), which governs shipping worldwide, announced it adopted three proposals deemed necessary to improve navigational safety and to reduce ship strikes on the approach to San Francisco Bay, the Santa Barbara Channel and the Ports of Los Angeles and Long Beach. Vessels in these areas also travel through National Oceanic and Atmospheric Association (NOAA) 's Cordell Bank, Gulf of the Farallones and Channel Islands national marine sanctuaries where blue, humpback and fin whales feed and congregate. Slow-moving whales are highly vulnerable to ship strikes, since many of their feeding and migration areas overlap with shipping lanes. In 2007, four whales (all blue whales) were killed by confirmed or likely ship strikes in and around the Santa Barbara Channel. In 2010, five whales (two blue, one humpback, and two fin whales) were killed by confirmed or likely ship strikes in the San Francisco area and elsewhere along the north-central California coast.
- In partnership with the Department of Energy (DOE), the Volvo Group is helping to lead the industry to advance innovative clean energy vehicle technologies and energy-efficient manufacturing. Through DOE’s SuperTruck program, the Volvo Group was awarded \$19 million – which the company is matching dollar for dollar – to improve the efficiency of heavy-duty vehicles like the Mack and Volvo Trucks. Volvo Group has also embraced manufacturing efficiency as part of the DOE’s Better Buildings, Better Plants Program, pledging to reduce the energy intensity of its manufacturing plants with assistance and guidance from DOE. These steps to become more energy-efficient will reduce operating costs at the facility, improving the competitiveness of the company’s products and manufacturing plants.
- The National Oceanic and Atmospheric Association (NOAA) announced the winners of its recent competition for education grants that will allow thousands of K-12 students around the country to get outside and participate in hands-on environmental education opportunities. A total of 59 projects will benefit from \$5.5 million in grants from the [ [HYPERLINK "http://www.education.noaa.gov/"](http://www.education.noaa.gov/) ]’s [ [HYPERLINK "http://www.oesd.noaa.gov/grants/bwet.html"](http://www.oesd.noaa.gov/grants/bwet.html) ] that will support activities ranging from data driven field investigations in the Pacific Northwest to studies of storm water management and invasive species in the Great Lakes. All recipients of B-WET grants emphasize meaningful watershed educational experiences — sustained, hands-on activities that are aligned with academic learning standards and responsive to regional education and environmental priorities. Some 2012 student

activities include learning about currents and marine debris on the coast of Hawaii with the Malama Kai Foundation, participating in field investigations in the Gulf of Mexico with the University of Texas, and developing urban schoolyard habitats with the Living Classrooms Foundation in Chesapeake Bay.

- A new network of water sensors in Monterey Bay is now aiding the abalone industry by monitoring water quality for harmful algal blooms and other potential hazards, helping to keep the valuable shellfish safe to eat while increasing knowledge of the bay's environment. The sensors monitor dissolved oxygen, ocean acidification levels, and oceanographic conditions that can lead to harmful algal blooms, among other hazards. The measurements will also create long, continuous records of the oceanographic environment in Monterey, feeding into the larger [ [HYPERLINK "http://www.ioos.gov/"](http://www.ioos.gov/) ] (IOOS®). This will also benefit other fisheries in the area and inform human health decisions. The [ [HYPERLINK "http://www.noaanews.noaa.gov/exit.html?http%3A%2F%2Fwww.cencoos.org%2F"](http://www.noaanews.noaa.gov/exit.html?http%3A%2F%2Fwww.cencoos.org%2F) ] (CeNCOOS), a regional member of the National Oceanic and Atmospheric Association (NOAA)-led U.S. IOOS program, is partnering with Moss Landing Marine Laboratories and the Monterey Abalone Company to install, operate, and maintain the water quality sensors in Monterey Bay. The system became operational in mid-June.
- As part of President Obama's all-of-the-above approach to energy, Secretary of the Interior Ken Salazar "flipped the switch" on the Enbridge Silver State North solar project in Clark County, Nevada, the first large-scale solar energy facility on U.S. public lands to deliver power to American consumers. This milestone is in line with the administration's broad commitment to expanding production of all sources of American made energy, including from renewable sources, such as wind and solar, which has doubled in the President's first term, as well as domestic production of oil and gas resources, which have increased each year the President has been in office.
- On Wednesday, the Environmental Protection Agency will enter into agreement to promote environmental sustainability by developing a cooperative working relationship between four institutions of higher education: South Carolina State University (SCSU), Claflin University, Orangeburg-Calhoun Technical College (OC Tech), and Aiken Technical College (ATC). As part of the agreement, the four institutions will form an Environmental Sustainability Working Group with the intention to develop sustainable campuses and communities in the Midlands, Lowcountry and Sea Islands (Gullah/Geechee Cultural Heritage Corridor) areas of South Carolina.
- Illinois was welcomed into the coastal management system, making the state eligible for approximately \$2 million in annual grants to help manage its Great Lakes resources. The creation of the Illinois Coastal Management Program comes at the 40th anniversary of the passage of the Coastal Zone Management Act by Congress in 1972. Illinois was the only remaining eligible state without an approved coastal zone management program in the act's history. The Illinois Coastal Management Program joins the National Coastal Management Program (CMP), a voluntary partnership between National Oceanic and Atmospheric Association (NOAA) and 34 coastal states and territories that provide frontline management of coastal resources for sustainable development and protection of natural resources. NOAA's CMP works with these coastal and Great Lakes states and territories to address today's most pressing national coastal issues including [ [HYPERLINK "http://coastalmanagement.noaa.gov/climate.html"](http://coastalmanagement.noaa.gov/climate.html) ], [ [HYPERLINK](#)

"[http://coastalmanagement.noaa.gov/ocean\\_re.html](http://coastalmanagement.noaa.gov/ocean_re.html)" ], and planning for[ [HYPERLINK](#) "[http://coastalmanagement.noaa.gov/ene\\_gov.html](http://coastalmanagement.noaa.gov/ene_gov.html)" ].

- National Oceanic and Atmospheric Association (NOAA) and the University of New Hampshire announced more than \$4.9 million to fund nine collaborative research projects aimed at making coastal communities and environments more resilient to rising sea levels, changing weather patterns, extreme storms, and ocean warming and acidification. The grants, made by NOAA's National Estuarine Research Reserve System (NERRS) Science Collaborative through its partnership with the university, will fund projects in South Carolina, Maryland, Massachusetts, New Hampshire, Maine, Rhode Island, Alabama, Oregon and California. Over the next two years, NERRS-led project teams will bring community stakeholders together with scientists, using the best science to make important resource management and public safety decisions. Projects will address community adaptation to sea level rise, implementation of low-impact development land use practices, oyster and wetland restoration, and river and watershed management.
- In support of President Obama's all-of-the-above energy strategy, and the Obama administration's goal of continuing to expand responsible oil and gas production, the Department of the Interior announced the release of a proposed rule to require companies to publicly disclose the chemicals used in hydraulic fracturing operations on public and Indian lands, with appropriate protections for proprietary information. Currently, there is no specific requirement for operators to disclose these chemicals on federal and Indian lands, where approximately 90 percent of the wells drilled use hydraulic fracturing to greatly increase the volume of oil and gas available for production. The proposed rule would require public disclosure of chemicals used during hydraulic fracturing after fracturing operations have been completed. This common-sense measure, which builds on the preliminary input received from the public, industry, tribal representatives, and other stakeholders, supports the continued development of America's abundant oil and gas resources on federal and Indian lands by taking steps to ensure public confidence in well stimulation techniques and technologies, including hydraulic fracturing. It is also in line with steps that some states have already taken, requiring operators to disclose the chemicals they use in activities on state lands.

## Conclusion

Calendar year 2012 was another outstanding year for the United States in fulfillment of our obligations under the North American Agreement for Environmental Cooperation. The success achieved in enforcing our environmental laws and safeguards, increasing levels of environmental protection, researching the technology to better understand our environment, and investing in infrastructure and strategies to combat climate change was encouraging. Additionally, the development of clean energy projects, the funding of monitoring networks, and inter-agency agreements to address pollution and waste management are clear signals that U.S. federal agencies are employing a comprehensive approach to environmental management. Moving forward, we will seek to expand the inter-agency dialogue on the North American environment. We are steadfast to the commitments made under the North American Agreement for Environmental Cooperation and will continue to seek new ways to further protect and improve the state of our environment in the years to come.

